

Richmond Refinery LPS Bulletin – Safety Potential Exposure during entry into V-1169B



IPS Control: 1619775

Contact Information:

Location:

D&R – West
5-Rheniformer

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Incident Description:

On September 3, 2009, an Inspector entered V-1169B Off-Gas Compressor Knockout Drum in the Crude Unit at D&R. Before the inspector entered the vessel, it had been chemically cleaned, blinded, and an entry permit had been issued.

After completing the inspection, the inspector requested the interior of the vessel be cleaned by grit blasting. After the cleaning, the vessel was re-sniffed by Operations, and the permit was updated for entry.

The inspector re-entered V-1169B and detected an ammonia odor. The inspector immediately evacuated the vessel and notified operations. Chevron Fire Department (CFD) re-checked the vessel for ammonia and found that it was present.

A TOP investigation was conducted.

Findings:

- 1) The chemical cleaning process did not remove all contaminants from V-1169B.
- 2) The initial entry process did not test for ammonia because there was no PPE matrix to identify the known hazards such as ammonia.

Lessons Learned:

- 1) Confined space conditions can change with the disturbance (e.g. grit-blasting) of process sludge and/or scale causing hazardous vapors to be released. Further assessment or re-cleaning of the equipment may be required.

What Worked Well:

- 1) The Inspector stopped work and involved the right people in resolving the problem after detecting an ammonia odor.

Recommendations:

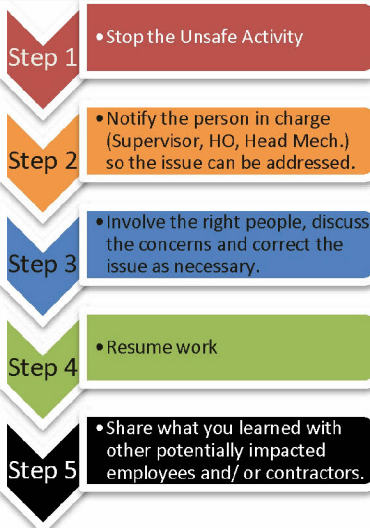
- 1) The D&R PPE matrix was revised to include V-1169B.
- 2) Validate the PPE matrix prior to shutdown/turnaround activity.
- 3) Recognize the potential for changing conditions when cleaning and working inside and outside equipment.

Tenets of Operation Violated

No Tenets were found to be violated.

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5 Steps of Stop Work Authority



LOSS PREVENTION SELF-ASSESSMENT

BEFORE BEGINNING ANY ACTIVITY/TASK/JOB, AFTER A LOSS OR NEAR LOSS, ANY UNUSUAL CIRCUMSTANCES:

ASSESS the risk!
What could go wrong?
What is the worst thing that could happen if something does go wrong?

ANALYZE how to reduce the risk!
Do I have all the necessary Training and Knowledge to do this job properly?
Do I have all the proper Tools and Personal Protective Equipment?

ACT to ensure loss-free operations!
Take necessary Action to ensure the job is done properly!
Follow written procedures! Ask for assistance, if needed!

DO NOT PROCEED UNLESS ALL RISKS HAVE BEEN ADDRESSED!
For Everyone • Every Day • All the Time

You are too Important to lose